

REMARKS

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 6,148,673 to Brown ("Brown") in view of United States Patent No. 6,105,436 to Lischer et al. ("Lischer"). Contrary to the Examiner's claim, Brown does not disclose two sealed volumes, as is claimed in claim 1. Rather, sensor 10 in Brown has a sensor element 30 having a pressure diaphragm for detecting a differential pressure, one side of the sensor element 30 being covered by a silicon gel 52, which protects the sensor element 20 from the external medium. This silicon gel 52 is used as transfer medium for the second differential pressure. Port 22, which is partially filled with silicon gel 52, has a cap 24, the space between the silicon gel 52 and the cap 24 being filled with air and making contact with the surrounding air at least in one exemplary embodiment (column 3, line 58 to column 4, line 9). An additional, variable force diaphragm as recited in claim 1 and on which the force to be measure has an effect, cannot be derived from Brown. Thus, in the subject matter according to Brown, it is not possible to measure a force acting on cap 24.

In addition, port 20, by which the first differential pressure is conducted to the other side of sensor element 30, has no seal, from which one can infer that the volume is open in port 20 (column 3, lines 53 through 58 and column 4, lines 61 through 67 as well as column 5, lines 29 through 32). If, as mentioned in the Office Action, in Brown the same fluid having the same temperature were used in ports 20 and 22, then there would not be any pressure difference between the two chambers. Hence, Brown does not have two sealed volumes, no additional force diaphragm, and also no measurement of force, as recited in claim 1.

As for Lischer, this reference describes a capacitive pressure sensor, which has a first chamber 110 and a second chamber 112, which are separated by a diaphragm 120. The first chamber 110 is evacuated in an exemplary embodiment such that a specified pressure prevails in this chamber (column 4, lines 24 through 32). The second chamber 112 is formed by an access tube 162, which allows a medium to access pressure diaphragm 120 (column 4, lines 32 through 38, see also Figure 1A). The representation of Figure 1a as well as of access tubes 152 and 162 having access lines 153 and 163 thus suggests a supply of at least one medium to the pressure diaphragm 120 during the measuring process for measuring the pressure in chamber 112 relative to the known pressure in chamber 110 (see inter alia column 4, lines 43 through 45). In addition, the formulation "sealed .. chamber" in column 1, lines 21 through 23 is to be read in such a way that the fluid is kept in the chambers and does not flow out. A hermetic enclosure of a medium in both chambers is not described in the document. Furthermore, Lischer gives no indication that both chambers are sealed in a pressure-tight

matter. An exchange of the fluid with the surroundings, at least in chamber 112, is therefore quite intended. This impression is confirmed by the description in column 4, lines 46 through 52, in which a difference pressure sensor is set forth based on the device described. Hence, Lischer also does not have two sealed volumes. Furthermore, Lischer also has no force diaphragm separated from pressure diaphragm 120 and is generally also not suited for measuring force. On the whole, one should also note with respect to the Examiner's argumentation that a measurement of force is not to be equated with a measurement of pressure.

It is respectfully submitted that the subject matter of the present application is new, non-obvious, and useful. Prompt consideration and allowance of the application are respectfully requested.

Respectfully submitted,

Dated: 4/7/05

By: Richard L. Mayer (Reg. No. 22,490)
Richard L. Mayer
Reg. No. 22,490

KENYON & KENYON
One Broadway
New York, NY 10004
(212) 425-7200